

BARKER TO HEAD FRATERNITIES FOR YEAR OF 1931-1932

Kimble Elected Vice-President
At Conference Meeting
Last Night

CONCLUDES YEAR'S WORK

At the last regular meeting of the interfraternity conference last night officers for the coming year were elected. William H. Barker '32 will head the conference for the year of 1931-32.

As Barker's assistants, John M. Kimble '32 was elected to the office of vice-president, William A. Kirkpatrick '32, secretary; Willem Holst, Jr., '32, treasurer; Thomas E. Sears, Jr., '32, chairman of the social committee; Robert B. Semple '32, member-at-large and Duke Selig, Jr., '32, chairman of the athletic committee.

Barker Active Around School

Barker, whose home is in Norwich, N. Y., is a member of Lambda Chi Alpha. He is active around school, being Business Manager of THE TECH, President of Pi Delta Epsilon, Vice-president of the incoming Senior class, Secretary of the Beaver Key Society, and a member of the Varsity Boxing team.

Kimble, president of the Phi Kappa Sigma house for next year, claims his home in Rochester, N. Y. Last year he was manager of Track, is vice-president of the M. I. T. A. A., president this year of the Beaver Key Society, and a member of Beaver Club and Quadrangle Club.

Kirkpatrick Member of Psi Delta

Kirkpatrick is a member of Psi Delta. His duties of secretary should be well known to him as he has held that office in his class for the last three years. He is a member of the 150 lb. Varsity crew, in the Tech Show his first and second years, and belongs to the Beaver Key Society, Alpha Chi Sigma, Masque and Tech Boat Club. His home is in Portland, Maine.

Sears, who is Theta Chi and lives in Braintree, Mass., was a member of the Institute Committee for three years. Holst is a member of the Sigma Alpha Epsilon fraternity and has been a member of the swimming team for three years. Semple, Delta Tau Delta, is well known through his activity with the Technicians. He was also a member of the Prom Committee and vice president of the Junior Class. Selig, Kappa Sigma, is Advertising Manager of Voo Doo.

T. E. N. Presents Electrical Issue As Its Final Number

Posters of Unique Nature Are
Used In Calling Attention
To Last Issue

Announced by a series of unique posters that attracted considerable attention, the final issue of The Tech Engineering News, an electrical issue commemorating the centennial of the discovery of electrical induction, was placed on the stands this morning.

Given a favorable criticism by those receiving advance copies, this special issue of the undergraduate technical journal contains articles that are expected to be of interest to the student body and faculty.

In their advance publicity on this issue, the managing board made use of a new form of advertising. Novel posters of black paper cut to silhouettes of various forms of electrical equipment and plants carried the announcements of the special electrical number issued today.

Announcement is made in this issue of the results of the regular spring elections for members of the present freshmen class. The current issue of the publication is the fourth to be edited and published by the present managing board which was elected at the regular winter elections for senior positions.

PI DELTA EPSILON SUBSCRIPTION RISES

Increase In Technique Signups
Necessitates Change

Plans for an increase in the price of Technique Sign-ups next fall have made necessary the addition of \$1.00 to the Pi Delta Epsilon Offer for making a saving in subscriptions to the various publications at the Institute. This will bring the total price of the offer up to \$7.00 and includes a saving of \$0.75.

As during the past year, the Pi Delta Epsilon Offer includes a year's subscription to THE TECH, Voo Doo, Tech Engineering News and the sign-up for Technique. It is emphasized that the addition in price is only to take care of the extra cost which Technique is placing on the sign-ups.

Blanks for the offer will be sent out from the Registrar's Office along with the registration material prior to the beginning of the next term. Students who so desire may transfer their bill to the Bursar's Office and pay for the same at the end of the term.

Sophomores Meet Seniors Tonight In Baseball Game

Juniors Forfeit to Freshmen in
Only Interclass Game
For Last Week

Because of the rain and cold weather of late, interclass baseball has been at a standstill. The last game played was last Wednesday between the Seniors and the freshmen, the game being won by the former.

Games scheduled for last Thursday and Friday between '31 and '32, and '33 and '34, respectively, were both postponed. The game for last night between the Juniors and the freshmen was forfeited to '34, as only three Juniors showed up for the game, probably also because of the cold weather.

Seniors and Sophomores Tonight

Today the second year men and the graduating class will meet in their second and final game, and possibly tomorrow the freshmen and Sophomores will endeavor to play off their postponed game. The league leading class of '33 defeated the Seniors upon their last encounter in a wild game.

With the forfeited game of last night the standing show the Sophomores in first place, the Seniors second and the other two classes fighting it out for the cellar. From this, the game tonight should have a lot to do with deciding the interclass winner for this year.

Harrison and Feustel to Pitch

Harrison and Feustel should do the pitching for this game tonight and, from previous performances, will do a good job of it. These two both showed up well the first time they met, but it was the first game of the year for both of them and their arms were not in the best shape, especially after the first few innings.

SHIP EXECUTIVE TO GIVE ADDRESS

President of Newport News
Shipbuilding Company to
Speak Friday

"Managing a Large Shipyard" is the subject of an industrial address which will be given by Homer L. Ferguson, President and General Manager of the Newport News Shipbuilding and Drydock Company, next Friday afternoon at 3:00 o'clock in room 5-330. The lecture will be given under the auspices of the Department of Business and Engineering Administration and is open to all students and faculty of the Institute.

Mr. Ferguson ranks at the top of the shipbuilding profession and has served his country in many ways. On resigning from the Navy in 1905, he became assistant superintendent of construction for the Newport News Shipbuilding and Drydock Company, and has been president of the organization since 1915. During all the years in which he has been connected with the company he has built up the physical property of the plant and improved the methods of operation as well as strengthened the personnel. He is especially interested in providing opportunities for ambitious people to do more worthwhile work.

MENORAH ELECTIONS TO BE HELD TODAY

Election of officers of the Menorah Society for the coming year will take place at the business meeting of the Society which will be held today in room 10-267 at 5:30 o'clock. The Society is the organization of Jewish students at the Institute and all members are expected to be present at today's meeting.

Beaver Key Society Elects New Officers

Officers for the Beaver Key Society for the coming year were elected at a meeting held yesterday in Walker Memorial. Following is the list of the new officers: President, Byron E. James '32; Vice-President, Addison S. Ellis '32; Secretary, William H. Barker '32; and Treasurer, Harry L. Moore, Jr. '32.

Selected To Succeed Dickerman in Turkey



LOUIS S. MORSE '31

Track Team Will Met Wildcats In Dual Home Match

Even Fight Predicted, With
Good Men Distributed in
All Events

New Hampshire University will be the next opponent of the Institute track team, in a home meet on Tech Field, next Saturday afternoon. From an inspection of the material available to each team, the meet promises to be closer than any others which have come off lately. Clever placing of men by either coach may spell victory for his team.

In the short dashes, the Engineers have failed to create much of a stir, but with new life instilled in the 220 by Johnny Jewett, and with Bill Hall rested up, there should be a different story to tell. McKay's steady pace will count heavily in the 880. He has done better on several occasions, than the time reported for the representative of the New Hampshire team.

Robertson and Grondal Should Star

Robertson's hurling of the javelin should be a feature of the meet, and it will have to be reckoned with by the scorers. Grondal may be expected to put the shot forty-three or forty-four feet and that is a difficult mark to better.

The Wildcats have won a long succession of meets on their home territory, but fail to take their invincibility with them on trips; aside from this, the Beavers will be on their own home field, and that should weigh favorably, especially in the track events.

COURSE XV SENIOR ELECTED TO TECH IN TURKEY HONOR

Louis S. Morse Third Man To
Represent Technology at
Robert College

TO SUCCEED DICKERMAN

Louis S. Morse '31 was selected last evening by the T. C. A. Cabinet, to be the next representative of Technology in the Tech-in-Turkey project. He will replace Fred N. Dickerman '30 who has been at Robert College, Istanbul for the past year. Morse is to be an assistant instructor in the Physics department.

Morse is a member of Sigma Xi fraternity, the Quadrangle Club, Beaver Club and was General manager of the 1931 T. C. A. Handbook. During the past year he was Vice-President of the organization. His home is in York, Pennsylvania, and he prepared for college at Phillips Exeter Academy.

Will Teach Physics

Although he will be in the Physics department at Robert College, Morse is graduating next month from Course XV. He has for some time been interesting in international problems and in the project of Tech-in-Turkey. He will be the third man to hold the position even though it is in the fourth year of its existence. The first man, Judson T. Biehle '27 held it for two years.

Robert College pays the living expenses of the man sent from Technology and T. C. A. furnishes his salary and transportation. The project is carried on both to carry out the idea of exchange students and professors and to further Christian Association work among foreign students.

STYLUS ELECTS NEW OFFICERS FOR YEAR

Stylus Appoints Committee To
Investigate Activity

In order to elect officers for the coming year, the members of "Stylus", the honorary society of THE TECH, met last Monday at 5 o'clock in the business office of the paper on the third floor of Walker Memorial. At that time the following officers were elected: President, John G. Hayes '33; Vice-President, Dayton H. Clewell '33; Secretary-Treasurer, David B. Smith '33.

Plans for introducing greater activity into the affairs of the society for next year were discussed. A committee was appointed to investigate the various possibilities for achieving this result. The following are the names of the retiring officers of the Society: President, Stuart R. Fleming '32; Vice President, Addison S. Ellis '32; and Secretary-Treasurer, Charles M. Thayer '32.

Round Hill Is Scene of Intensive Research Work By Technology Men

Large Airport Among Many
Features of Estate at
South Dartmouth

Round Hill, an estate of 500 acres situated on the ocean several miles south of New Bedford, forms the setting for much of the field research work in radio, aviation, and meteorology that has been carried on by Technology during recent years. This beautiful tract, surrounded on three sides by water, takes its name from the shape of the little point of land which forms its outermost boundary. The estate was placed at the disposal of the Institute several years ago for research purposes by its owner, Colonel Edward H. R. Green.

Although communication by short-wave radio forms the principal interest of the research staff at Round Hill, the greatest part of the estate is given over to the uses of aviation. The unflagging interest of Colonel Green in the development of aeronautics and its allied sciences has resulted in the expenditure of a vast amount of money on the building and equipment of the Round Hill Airport.

Facilities For Housing Blimps

The Airport has two runways at right angles to each other, each about three-quarters of a mile in length. The field is lighted by a complete General Electric system, consisting of million-candlepower flood-lights at the corners, and white and green lights marking the runways. The housing facilities consist of an airplane hangar and a dirigible dock, both floodlighted at night. The dock resembles a huge gray barn, and is used by the small Goodyear blimps which pay occasional visits to New England. There is also a landing ramp for seaplanes, and Col-

onel Green has a cabin flying boat for personal uses.

In addition to the lighting of the field, the buildings, and the radio towers, a huge "Round Hill" sign, with luminous neon letters 30 feet high, lies on the roof of the Green mansion.

Issue Daily Reports

Technology's weather observatory and meteorological laboratory is adjacent to the airport. The station issues daily weather maps for the United States and distributes forecasts for aircraft operating in the vicinity of Round Hill. The importance of this work is such that the establishment of chains of such stations along the principal air routes of New England has been advocated by several local aircraft companies.

The equipment for weather observation is precise and delicate. A rain gauge, electrically operated, measures precipitation in hundredths of inches. An anemometer and a wind direction indicator give instantaneous readings of wind velocity and direction on dials inside the station. A recording barograph keeps records of variation in air pressure. Accurate methods of measuring humidity are being developed.

Investigate Fog

Fog has formed the subject of extensive investigation at Round Hill. Experiments carried on with the help of captive balloons and aircraft include the study of temperature distribution in fog, the thickness of fog banks, the measurement of humidity, and the relative visibility through various kinds of fog. Much data has already been gathered on the navigation of airplanes and on communication between aircraft and ground.

(Continued on Page Three)

Testing Machines of Great Power Perform Spectacular Experiments

Theses Carried on in Testing
Materials Laboratory
Use Its Aid

Capacity of 1,000,000 pounds, calmly announces a sign in neat white lettering in the Testing Materials Laboratory. Placed in the mighty machine upon which this sign is painted stands a reinforced concrete column securely wrapped around with a tarpaulin. A turn of the wheel, the needle slowly creeps up to the 400,000 pound mark, there is a slight noise of disintegrating concrete as the top of the column gives way. A chain fall hoists up the specimen and removes it to one side thus marking the end of one part of the experiment.

Among the many theses which are at present being worked on in the Testing Materials Laboratory, involving sometimes spectacular tests like the one described above, is that undertaken by a student for a Master's Degree in Course IV-A which will perhaps serve as a fair example of the type of work the investigators must meet.

"Investigation of the transfer of stresses as one column fits into a larger column, the transfer being made by means of steel dowels. Shrinkage measurements and steel and concrete strain measurements are made." In these words are set forth the sub-

ject of the thesis with which the article will deal, in the course of which it is necessary to subject the columns under investigation to the action of a testing machine to see which part will break under the strain first.

Research Has Practical Value

The student carrying on the experiments will obtain data on a subject which has not been studied much in precisely the same manner hitherto. Certain concrete columns are often joined to the base upon which they rest by means of steel dowels, half the length of the dowels being imbedded in the base, the other half in the column.

To measure the effect of the transfer stresses set up in the dowels when under load on the base, wooden plugs were placed at various intervals on the steel when the concrete was poured into the molds, leaving, after the concrete had set, holes down to a depth of three inches through which the exposed, imbedded steel might be studied.

Shrinkage Readings Taken

Shrinkage readings of any stresses put on the steel by the setting, expanding, and contracting of the concrete before tests were begun were also made. Measurements were taken with the aid of a special eight inch Berry Strain Gauge.

After readings at different loads (Continued on Page Four)

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		W. J. Lindsey '34	

TECH IN TURKEY

FOUR years ago the Institute sent its first representative to Robert College at Constantinople, Turkey, as an experiment in carrying to the Near East matters of a technical nature, and of fostering a world peace through a close association of the various races. Last year at this time a new man was selected to replace the first delegate, and now Technology Christian Association announces that it has chosen its man for next year.

In Louis S. Morse '31, the association has made a worthy selection. Morse has long been interested in the work of the T. C. A. and has within his four years at the Institute contributed his share in carrying out the purposes of the organization. However, it is not so much the man as the project in which we should be primarily interested.

It must be admitted that there is presented a great difficulty in carrying out such a program as the T. C. A. proposes in transforming the many races in the Near East into a body of peaceful and loyal world citizens by the mere sending of an American to teach school there; but there are many reasons to believe that the ideal may at least be encouraged. Robert College is one of the influential schools in that part of the world, and its student body is fairly representative of that heterogeneous population. Undoubtedly, some impression may be made upon a large minority of these men who may, in turn, influence a greater number. To the new delegate we extend our congratulations, and express our earnest hope that he may do his share in contributing toward an ideal of world-wide interest.

LITERARY ENGINEERS

"T. E. N. on stands today" has long been the signal for a renewed interest in this publication among the student body. The Institute supports four major student publications, but as a technical school it houses no more appropriate magazine than the Tech Engineering News.

In investigating the various undergraduate activities, we have attempted to outline as carefully as possible the original purposes for which these organizations were founded, and to comment upon any obvious defects in their present policies. In T. E. N. we find a difficult subject for adverse criticism. Every year this magazine has increased its scope, its interest, and its popularity among the student body. This is remarkable, for in the short span of its existence—it was founded only twelve years ago—this publication has become a vital part of student opinion and instruction, and an asset to the technical education which the Institute offers.

We have heard it stated that the publication of the undergraduate scientific journal should be no arduous task in a school of as high a technical reputation as the Institute. On the contrary, Technology students expect a serious and accurate discussion of these technical matters to a degree higher than that found in the average popular science magazine. The editors of T. E. N. must be ever on the alert to the newer developments, the latest accomplishments, and the most recent of theories. As a consequence it becomes no easy task to acquire the sort of article that satisfies student demand.

In the policy of publishing student papers, along with those of Technology instructors, the Tech Engineering News further distinguishes itself. The remainder of the material found in the monthly issue of this publication may be attributed to the farsightedness of the publishers. The biographies of Institute professors, the various shorts of engineering interest, and the lives of the men whose names appear on the facades of the buildings are all worthy of columns in T. E. N. The articles written by men experienced in the industrial and engineering world contain opinions and discussions which are valuable to the aspiring undergraduate.

Decidedly, we are fortunate in having at the Institute a publication of the sort that T. E. N. represents. It appeals to the innermost appreciation of practically every undergraduate, and in the most part voices a new and younger attitude toward the problems that we all are to face sooner or later in our subsequent careers.

Technology Department of Ceramic Research Testing New England Clays

Professor Norton 'Now Carrying On Investigation of Various Clays

Tests for various clays to see for what they can be used and into what they can best be made are being carried on by Professor Frederick H. Norton in his ceramic research work at the Institute. The clays under his investigation are from the New England states. He is greatly aided in his work by employing kilns which can burn ware more rapidly than has previously been possible anywhere.

In the May, 1930, issue of "The Ceramic Age" Professor Norton's first results were published. His article mentions nineteen clays, each of which is described, analyzed, and discussed as to its use. Most of the specimens used were taken directly from the clay pit, with due regard to obtaining a representative type. About fifty pounds of each sample was used.

Pressed Into Bars

After proper consistency of the clays was obtained they were pressed into bars one-inch square. In most cases the firing in the laboratory was more rapid than is the case in actual practice, so that allowances had to be made for unusual effects on the clays.

Besides the analyses and general description of the clays, their water of plasticity, drying shrinkage, their color when dry, their porosity, and their firing characteristics were listed.

Summarizing, Professor Norton stated that the New England Glacial clays were suitable for common brick, and that fuel cost was one of the reasons why they were not employed more extensively for other purposes. He found that the kaolins are the only high grade clays in New England and that it would be excellent as refractory material, for white face brick and tile.

Further Work Also Published

More results of Professor Norton's research were published in the December, 1930, issue of "The Ceramic Age." This had to do with a terra cotta body, busts of which are in the ceramic art exhibit on the first floor of Building 2.

Properties necessary for a terra cotta body which would be suitable for sculpturing were sought in the body. Such requirements are a coloring and texture which will resemble flesh, softness for easy working, ability to cast well in a mold, and no burning shrinkage.

After numerous trials the most satisfactory body obtained was found to contain 60 per cent Maine feldspar, 30 per cent Glacial brick clay from Gonic, New Hampshire, and ten per cent dark English ball clay. This body has absolutely no burning shrinkage. One of the most remarkable properties

of this clay is that the raw material can be added to the surface of an already burned piece and after re-burning can be united perfectly with the latter. Such an advantage can readily be seen, for it allows one to repair burned pieces.

Among the various interesting clays which Professor Norton has analyzed is a white Vermont clay which is a natural porcelain body (can be directly burned into porcelain). This property is also true of the clays found in China which are used in Chinese pottery.

Research on Glaze Coloring

In what is probably the first scientific work which has been done on glazes and their coloring, the Ceramic Department has found general laws connecting color with concentration of coloring oxides that held for all glazes tested. Such laws have long been in demand by ceramic manufacturers.

Several theses of interest are at present going on at the Institute with regard to ceramic work. One is "The Study of the Effects of Various Elements in Coloring of Glaze." The spectrophotometer is being used in this work, and it is in this research that the general laws mentioned above were found.

Colored Porcelain Bodies Studied

Colored porcelain bodies and the effect of various methods of burning red brick clay are also being studied. Another thesis is the investigation of copper red glazes.

Professor Norton has just completed research work on the "Effect of Time on the Maturing Temperature of White Clays." In this study six different white ware bodies were molded and placed in a kiln which could attain a temperature as high as 1450 degrees Centigrade. It was fired by gas which was controlled by a regulator, so that changes in temperature reached a maximum of plus or minus five degrees.

Burned Varying Durations of Time

Specimens were run in the furnace for durations of 10, 100, 1000 and 10,000 minutes, but in all cases the firing and cooling were fairly rapid. After being taken from the furnace they were measured for linear shrinkage and porosity. As a result of the work it was found that the relation between the time and temperature effect on the rate of reaction could be expressed by a law of Arrhenius, a former physical chemist.

According to the investigation earthenware could be fired as rapidly as possible, but vitrified ware would blister unless brought to the proper temperature more slowly.

The faculty have turned the thumbscrews on The Horribles' Parade at Tufts this year. It seems that last year's dramatization of the Specialist was too much for the professional code of ethics.

COLLEGE COMIC HAS STRANGE CONTEST

At last the prospective graduates and those underclassmen on the verge of flunking out of any college or university in the United States are given an opportunity to air their feelings about that certain professor with whom they simply could not get along. "The Muhl," of Muhlenberg College, is offering \$100 in gold to the American college student who submits the most thought-provoking and constructive essay on "What's Wrong With Professors?"

Contestants are warned not to become too facetious in their contributions, for essays will be debared unless they are constructive despite their frivolity. A prominent publication house seeing the possibilities in such a survey of college men's opinions, in the expectation that there will be no dearth of contributions, has arranged to publish the prize winning essay as well as the most constructive of the others.

Does it depend on the section of the country or does a year at college change their ideas? Entrance applications reveal that of all the freshman co-eds at University of Chicago only one wants to get married—and she may change her mind. But at the University of California over two-thirds of the upperclass woman students have indicated that they would gladly leave college for the right man.

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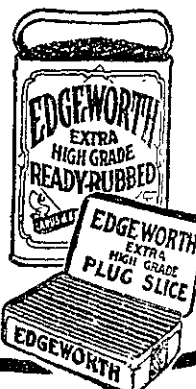
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READ & WHITE

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Junior Varsity Crew for New Season of 1931 Which Races Columbia on Saturday



Front row, left to right—Cummings, Birdsell, Binner, MacLeod. Back row—Dunning, Evans, Glenn, Thieler. Coxswain, Dunlap.

NEW BUILDINGS TO HOUSE ADVANCED STUDY SECTIONS

Three New Structures Have Been Authorized, But Only Two Begun

OTHER TO FOLLOW LATER

Plans of long standing finally materialized last October in the announcement of the construction of a new Institute building to house the advanced study and research sections of the Departments of Physics and Chemistry.

The construction of three buildings was authorized last fall, but only two of them have been started. The main Physics-Chemistry building and the special spectroscopy laboratory alongside it are now in the hands of the pile drivers; but the cryogenic or low-temperature, research building, which is to be in the vicinity of the Hangar Gym, has not been started.

Funds From du Pont, Eastman

Funds for the construction came from a gift of \$2,500,000 made by George Eastman to the Institute in 1916. As this fund has been in use as part of the Institute's endowment fund, it is made use of at this time through the offer of Mr. Lamont du Pont '01, chairman of the board of E. I. du Pont de Nemours Co., to give the Institute annually a sum equivalent to the interest that would otherwise come from Mr. Eastman's gift.

Building 6 will, of course, correspond to the adjoining buildings in architectural style. It will be 300 by 60 feet on the ground, and will have four stories and basement. In addition to the various research laboratories, there will be a large shop for the construction and maintenance of research apparatus, a large lecture room, and a library and reading room for the use of students and members of the instructing and research staffs.

Special Foundations Used

Extra heavy foundations are being used under both the main research building and the spectroscopy laboratory to reduce vibration. About 3,200 piles are being used for the structures now being worked on. The spectroscopy laboratory will have very special foundational construction.

This building will be put on a mat composed of alternate layers of sand, felt, transite board, ground cork and reinforced concrete. The two floors will be supported independently from the exterior walls and roof.

The whole laboratory will be so well insulated against changes of temperature that if the temperature of the outside air were suddenly to change one hundred degrees, it would take the interior of the building about a month to change one degree.

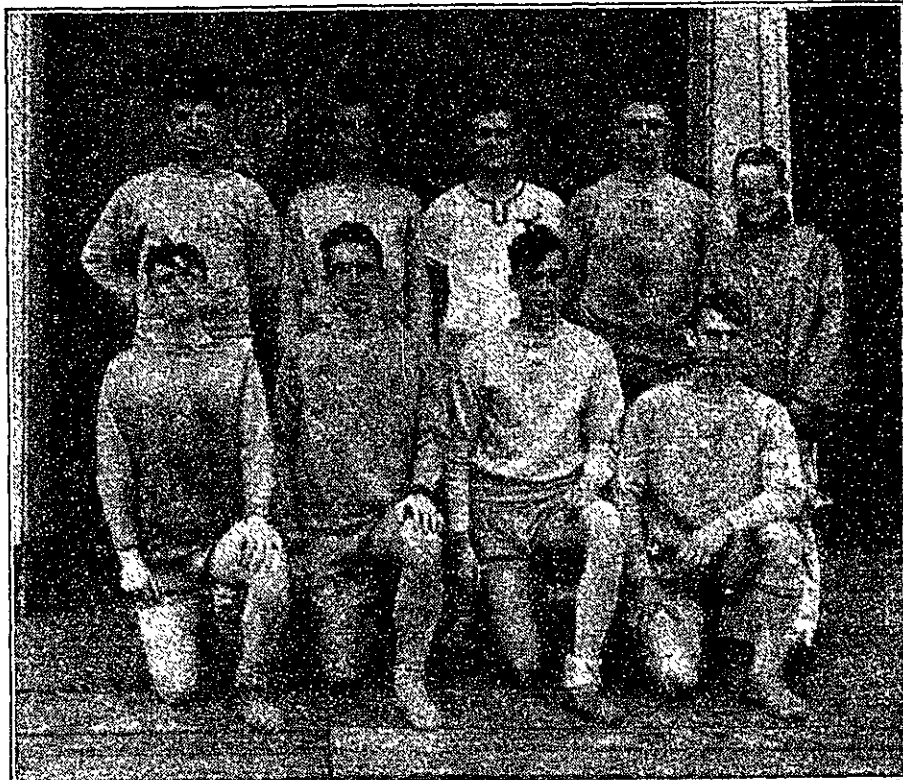
The science of spectroscopy, which is becoming increasingly important in the field of atomic research, requires especially constant conditions as to temperature and vibration; this is the reason for the extra care being lavished on this building.

Prof. George R. Harrison, who came to the Institute this year from Leland Stanford University to become director of the Research Laboratory of Experimental Physics, is equipping the laboratory with a collection of instruments he has made.

As the Institute buildings are built on made ground, and as the level of the Charles River Basin is about that of the basement level of the buildings, it was, and is, necessary to use pile foundations throughout. Under a part of the buildings there is a bed of sand, which was, in past geologic time, a creek of some sort. This sand bed provides excellent bearing surface for the shorter piles which are being used over it.

However, the other parts of the foundations must rest on the blue sewer mud which was pumped in behind the seawall when the land was made, and for this the long fifty-five foot piles are used. Because of the high level of the ground water, and to prevent rotting, the piles are being sawed off six inches below the level of the

Varsity Crew Which Will Race Saturday With Oarsmen From Columbia University



Front row, left to right—Ayers, Regan, Pleasants, Valentine. Back row—Cimorelli, Hapgood, Miller, Richardson. Coxswain, Whitaker.

ROUND HILL ESTATE SCENE OF RESEARCH

Institute Maintains Radio and Meteorological Lab

(Continued from Page One)

radio stations. Further studies will involve the use of special navigation instruments, research into the penetration of light through fog, methods of accurately determining altitude, and airport landing beacons.

The radio station at Round Hill is well known to amateur radio operators all over the country by reason of its scheduled standard-frequency transmissions. These transmissions are the gauge by which the amateur sets the wavelength of his sending set and his frequency-measuring apparatus. In addition, the station is used for a great variety of experimental work. The transmission of short waves over long distances gives rise to highly complicated problems. The energy loss of radio waves as they travel over various kinds of land and sea, the distribution of a station's field strength, the effects of weather on radio signals, and communication with aircraft are some of the absorbing problems which are being tackled by the Technology men at Round Hill.

Old Whaling Ship Preserved

An additional feature of interest is the old New Bedford whaling ship, "Charles W. Morgan," which has been bought and preserved by Colonel Green. Although the old vessel has been set in concrete, it is manned by a complete crew during the summer, and is open to visitors.

The Green estate is the objective of an excursion which is being arranged by the M. I. T. Radio Society. A bus has been chartered, and will leave Walker Memorial at 11 o'clock next Saturday. The round-trip fare has been set at \$2.25. A limited number of airplane reservations are also being made, at ten dollars each which must be in as soon as possible. In addition, 15-minute airplane rides will be given from the airport for two dollars. Ladies are also invited to make the trip, and the Society urges that all persons who wish to go make reservations before Friday afternoon at Room 4-202.

It sounds bad for the Purdue boys, but the official insignia of Purdue co-eds is corduroy trousers and they're all supposed to wear them.

"College boys should make the most of their opportunities to play in orchestras," according to Ted Lewis, who needs no further introduction, least of all to college students, who are among his most enthusiastic admirers.

Jim Thorpe, former football star on the All-American team of over a decade ago, once called "the greatest athlete of all time," is now digging foundations in Los Angeles for \$4 a day, it was discovered recently.

After playing college football, Thorpe was a professional baseball player for several years.

Wenzel A. Raboch, professor of Music at Theosophist University, Point Loma, California, was recently inducted into Phi Beta Kappa, fifty-seven years after his graduation from C. C. N. Y. The announcement of his election had been lost in the mails, and only just rediscovered by some diligent seeker of back records at the New York college.

CLUB PLANS UNUSUAL DANCE DECORATIONS

Catholic Organization to Hold Annual Spring Formal

Looking forward to a large attendance at its annual Spring Formal Dance to be held next Friday evening in Walker Memorial, the Technology Catholic Club is preparing for a gala affair to which all are invited. The committee in charge of decorations promises that the usual aspect of the Main Hall of Walker Memorial will have disappeared beneath woods.

Banks of palms and ferns will provide a tropical setting for the doorway. Featuring the interior will be greens twined about the pillars, more potted plants, and gay, attractive groupings of balloons hung from above. Playing over these decorations about the room will be the multicolored rays from a crystal ball. It is promised that those attending will spend a most enjoyable evening.

TRIP TO ROUND HILL MAY BE BY AIRPLANE

For ten dollars it will be possible for any student taking the trip to Round Hill with the Radio Society on Saturday to fly the whole distance of the trip in a six place Bellanca Cabin Plane. If the occupants so desire the monoplane will fly at high altitude for the one hundred and fifty mile distance so that the whole Cape can be viewed at one time. Signups for this offer must be made immediately in Room 4-202.

At Ohio State student publications made a profit of more than ten thousands dollars during the past year. As a result the editor and business manager of the Sun Dial, the humor magazine, will receive over two thousand dollars as their salaries.

An annual event at the Emory Law School is the Easter egg hunt that is given for the faculty. Easter eggs and rabbits are the main attraction, although a prize of two dollars in nickels is offered to the prof that finds the most eggs. Just another case where youth returns to man.

CORPORATION XV

Corporation XV will hold a meeting tomorrow at 4 o'clock in room 1-331. Officers for next year will be elected at this time.

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WHITE WOOL SPORT HOSE, 50c Pair

TECHNOLOGY BRANCH, H. C. S

TRACK BANQUET WILL BE HELD NEXT WEEK

Many prominent alumni are expected to attend the annual Track banquet which will be held at Charlie Warmuth's restaurant on May 19. Already practically the entire track team has signed up to attend the affair which is the closing get-together of the men for the year.

Captains and Managers of the track team for the coming year will be announced on the occasion and cups which have been won will be presented. It has not yet been decided who the toastmaster for the occasion will be, but it will be announced in the near future.

FROSH CREW PLAN TO GO TO POUGHKEEPSIE

In order to defray expenses for the trip to the Poughkeepsie crew races the members of the freshmen crew are planning a dance in Walker Memorial for Friday, May 22. Previous to this year each man on the crew paid his own expenses for this annual trip.

This is the third time that a Frosh Crew representing Technology has entered the Regatta. In the past entries the freshmen have not made such an excellent showing but because of the new coach for this season it is expected that they will do considerably better.

water. It is well known that wood, if kept constantly immersed in water, will last indefinitely without noticeable deterioration.

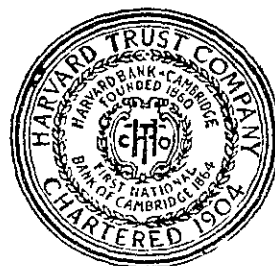
Cryogenic Laboratory Projected

Several years ago, a bad explosion occurred in the course of low temperature research at Harvard University. At that time, this type of research was discontinued until the causes of this explosion were better understood. At the present time, they are pretty well known, and construction on this laboratory at Technology will be started fairly soon.

The laboratory, when constructed, will place the Institute in a unique position as regards cryogenic research; Prof. Frederick G. Keyes is widely known for his work in this connection. It is planned to manufacture nitrogen, hydrogen and helium in quantity, and to supply it at cost to the laboratories at Harvard and the Institute, as it is necessary in certain phases of research.

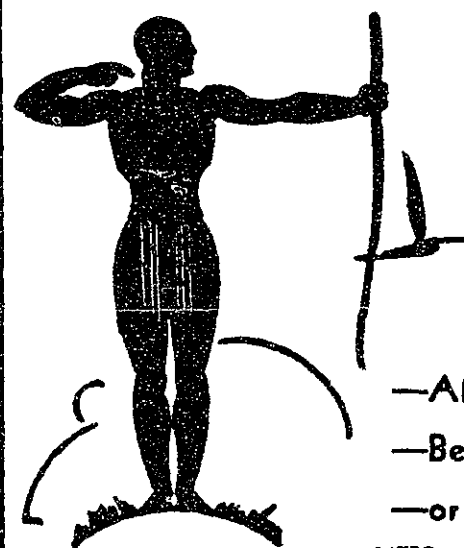
The main physics building was designed by Mr. Carlson of the architectural firm of Collie and Carlson, and the spectroscopy laboratory by the firm of Charles T. Main Inc. Stone and Webster are doing the construction work.

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OFFICIAL BULLETINS OF GENERAL INTEREST

Physics and Physical Chemistry Mass. Inst. of Technology
Thursday, May 14, 3:00 P.M., Room 8-319

Physical Chemistry Conference. Mr. Spencer S. Prentiss will speak on "The Freezing Points of some Nitrates and Some Ammonia Salts."

Thursday, May 14, 4:00 P.M., Room 4-231

Physics Colloquium

1. Report on the Washington Meeting of the American Physical Society. Professors G. R. Harrison and B. E. Warren.
2. Magnetic Properties of Single Crystals. Professor J. C. Slater.

Special Lectures Dr. Sanford A. Moss

Thursday, May 14, and Friday, May 15

4:00 P.M., Room 5-130

Dr. Moss, of the Thomson Research Laboratory of the General Electric Company, will give his last two lectures in the series which he is presenting. The titles of these two lectures will be respectively "Supercharger Practice" and "Supercharger Theory."

Open to students and members of the instructing staff.

CALENDAR

Wednesday, May 13

6:30 P.M.—Technology Catholic Club smoker, North Hall, Walker Memorial.

Thursday, May 14

6:30 P.M.—Mining Society dinner, Faculty Dining Room, Walker Memorial.

7:30 P.M.—Aeronautical Engineering Society meeting, North Hall, Walker Memorial.

Friday, May 15

6:30 P.M.—Track Team dinner, Faculty Dining Room, Walker Memorial.

9:00 P.M.—Technology Catholic Club formal dance, Main Hall, Walker Memorial.

9:00 P.M.—Alpha Phi Delta dance, North Hall, Walker Memorial.

Saturday, May 16

11:00 A.M.—Radio Society trip to Round Hill. Bus leaves Walker Memorial.

6:45 P.M.—Baton banquet, Faculty Dining Room, Walker Memorial.

Infirmity List

John P. Breden '31 (G).
Charles Brown. Employee.
A. Harper.
T. Kaplan.
Theodore O. J. Kresser '34.
Perm Limpisvasti, G.
Professor F. Alexander Magoun.
James A. Sweeney '34.
Wichian Vibul '31.
Warren A. Wilber '34.

LACROSSE PICTURES

Technique Pictures for both Varsity and Freshman Lacrosse Teams will be taken on Tuesday afternoon, May 19, at 5:00 o'clock in the Photographic Studio.

CREW PICTURE

Varsity, Jay-Vee, 150 and first freshmen crews will have their pictures taken on Monday, May 18, at 9:00 o'clock at the boathouse.

Men desiring to run on the cross country team, for the fall season of 1931, should attend the Cross Country Mass Meeting this Friday afternoon at 5 o'clock. It is to be held at the track house, and Coach Hedlund will be present to discuss the plans for next year's season.

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MACHINES OF GREAT POWER USED IN LAB

(Continued from Page One)

were completed, the specimens were then subjected to enough pressure to break them. Although the two columns so far tested broke at different points, both required a force of 400,000 pounds before they gave way. Curiously enough, less care was taken in curing the specimen which failed as it should around the upper part of the dowels, than was given to the column which gave way at the top. The latter was allowed to set in a room where a constant temperature could be maintained while the other one dried in the air of the Testing Materials Laboratory, subject to the stresses set up by the expansion and contraction of the concrete in the changing temperature of the air around it.

"Damp" Room Aids Workers

In addition to the "control room" with its insulated walls and door, where the temperature can be held fairly constant, there is, in the basement of Building 1 another interesting chamber, known as the "damp room" where the humidity is kept at 100% by means of dripping water. The walls are lined with shelves on which rest concrete specimens of all sizes and shapes, most of which are to be used in research work.

With the facilities which the Testing Materials Laboratory offers, investigations covering a wide range of subjects are constantly going on, from shear tests on duralumin sheets to a study of the properties of reinforced brickwork, subjects which perhaps sound uninteresting to the layman but which often have great practical or theoretical value nevertheless. In view of the wide range of subjects covered it is impossible to select a typical example but the investigation described in the article will perhaps give some idea as to how an experimenter goes about solving an original problem.

Students at the University of Wisconsin are required to carry identification cards to prove their eligibility to attend classes. So many outsiders were making use of the opportunity for a free education, that this rule had to be strictly enforced.

The latest in rackets! The favorite pastime of the members of a fraternity at the University of Pittsburgh, while they were quarantined for scarlet fever, was the phoning of scots. The racketeer in question secured a large supply of nickels and sold them to his fraternity brothers, four for a quarter.

One of the subjects that enjoys a maximum enrollment at Stephens college is a class now being offered in casting and fishing. That would be a fine class to have at this time of the year, but we'll bet that a written examination would bring out some "fishy" answers.

Advertising for a purpose is perfectly exemplified by this ad, published by a freshman at the University of Kansas, "Wanted: As roommate, another freshman who does not smoke."

Review of Year's Activities

Under the heading "Review of Year's Activities" THE TECH will present in its remaining issues this term, summaries of the activities of the various student groups at the Institute. Material for these reviews of student activities has been obtained from the leaders of the activities in some cases, the review has been written by a person connected with the activity.

COMBINED MUSICAL CLUBS

Opening the 1930-31 season the Combined Musical Clubs presented a concert at the Franklin Square House, an annual affair given by the Clubs for the girls who live there. The concert was presented on November 4, 1930, and consisted of semi-classical and popular selections. Following the concert a dance was given to which all the members of the Clubs were invited.

The second concert of the season was arranged with Filene's Cooperative Association on November 13, 1930, the Clubs presenting a delightful program, of the usual type, before a large number of employees and guests of Filene's. The dance which continued until 10:30, after the concert, was held in the public dining hall on the eighth floor.

The third concert of the season was the Christmas Concert, held in Walker Memorial on December 12, 1930. Since this concert was controlled entirely by the management, decorations could be arranged according to the tastes of Technology men alone. A background of indirect blue light, colored with the changing hues of four spotlights, formed a delightful atmosphere for the dancing following the concert. Two hundred couples danced till 2 o'clock to the music of the Technonians.

On February 27, 1931, the Glee Club journeyed to Hartford to compete in the New England Intercollegiate Glee Club Contest. While there the Club was taken care of and entertained by the Hartford Chamber of Commerce. Unfortunately, they did not place highly in the contest, coming in next to last.

The first entertainment following the mid-year vacation was given under the auspices of the Factory Mutual Fire Insurance Company of Boston, on March 5, 1931. This engagement, given at the Church of the Redemption on Boylston Street, consisted of a dance with accordion, banjo, and xylophone specialty acts presented during the intermissions.

The next concert, given on the evening of March 12, 1931, was the Employer's Liability Insurance Corporation Concert. The Clubs presented another of the usual type of concert, for the employees of this company, in their own entertainment hall in Boston. This Corporation has provided a whole floor of their office building for recreation and entertainment. An organization within the corporation, the Owl Club, had charge of the affair. Dancing followed the concert, continuing till 10:30 with music furnished by the Technonians.

A combined concert and dance given jointly by the musical organizations of Boston University, and the Combined Musical Clubs of Technology was presented on March 6, 1931, at the Hotel Somerset. Alternate selections from one school, then from the other, made up an extended program. Dr. and Mrs. Karl T. Compton, and Dr. and Mrs. Daniel L. Marsh of Boston University honored the affair with their presence. Two orchestras, the Technonians and the B. U. Buccaneers, furnished the music for the dancing which continued till 2 A. M.

A poster contest introduced the Spring Concert and Dance which brought to a close the concert season of the Clubs. Forty posters were submitted by students in the Architectural department, and the three best were awarded tickets to the Concert and Dance. The Concert was composed of semi-classical and popular selections as well as banjo and xylophone specialty acts. At twelve o'clock intermission in the dancing, two floor acts were presented by way of side entertainment. Dancing then continued till 3 A. M. Mrs. Horace S. Ford, Mrs. William T. Hall, and Mrs. James R. Jack acted as matrons. Lighting was specially arranged for this Concert by the Management. A peculiar scheme of light harmony was used during the concert to emphasize the mood and the character of the music. Lighting during the dancing was arranged to create a very congenial atmosphere for those who danced.

Only the annual Banquet remains before the Clubs bring this season to a close. All members of the Clubs as well as the management will be invited to attend this last gathering, which is to be held in one of Cambridge's prominent hotels. At this time men elected to the Baton, the Musical Clubs' honorary society, and the new management for next year will be announced. The date and place of this function are yet to be set.

Calendar of Events For Year 1931-32

1931

OCTOBER

9—All Tech Smoker

NOVEMBER

2-6—T. C. A. Drive

6—Field Day

16-21—Senior Ring Signups

DECEMBER

4—All Sports Night

11—Christmas Concert of Combined Musical Clubs

14-22—Technique Signups

16—Delivery of Senior Rings

18—Official Date for Wearing Senior Rings

1932

JANUARY

6—Annual Dormitory Dance

15—Senior Dance

FEBRUARY

8-13—Technique Signups

10—Junior Prom Signups

MARCH

4—Pops Concert

7-19—Tech Show Ticket Sale

15-19—Tech Show Performance

18—Junior Prom

24—Technique Redemptions

APRIL

29—Spring Concert and Dance of Combined Musical Club

30—Open House Day

MAY

May 7—Activities Tea Dance

Intercollegiates

Goucher College students have expressed editorial amazement at the discovery that 59 per cent of library patronage of detective stories is by faculty members.

The University of Vienna has some old customs by which it still abides. All pledges to fraternities are required to learn how to duel before they are initiated; the professors must wear swallow-tail coats to all classes, and class attendance is both compulsory and strictly enforced. Our class system isn't all our own after all!

The American "University of Prohibition" will graduate its first class this coming June. The school is maintained by the Federal government in Washington. The graduates will immediately take positions as prohibition officers.

Seniors only are allowed to spin tops at Princeton while juniors can only engage in playing marbles.

A student Hall of Fame in which prominent students on the campus will be placed is being planned by the University of North Dakota. Phi Beta and varsity lettermen are eligible.

Support of \$12,500 a year to the Medill School of Journalism at Northwestern University has been offered for a second 10-year period by the Chicago Tribune.

The graduating class at Carnegie has adopted a couple of new slogans in view of the unemployment situation. They are: "Idleness Forever" and "Months for Fun but Jobs for None."

At George Washington the varsity letters given to members of major teams are very insignificant. They are only eight inches high by a foot wide and any man of slightly larger than average build can wear them.

Two students at the University of Georgia were without sleep for one hundred hours so that the head of the psychology department could make observations of the results.

Students living in one of the dormitories of the University of Georgia were warned recently that if they did not refrain from taking so many baths they would have to pay an extra fee.

Millsaps College in Mississippi has adopted a plan for determining the amount of tuition to be paid by students in proportion to their scholastic standing.

Berea College, in Kentucky, offers more per dollar, to a student, than any other college in the country. There the total charges including registration and books never exceed \$146.00 for an entire school year. Tuition is free. Sixty-five cents a week is the charge for a furnished room with hot water, linen, and electricity, while the meals average about eleven cents apiece.

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THE EDITORIAL SPECULUM

In a purely technical institution such as ours, where classical and aesthetic appreciations are in no way emphasized or fostered, it would seem almost incredible that a host of music lovers should exist. However, such is exactly the case as is evidenced by the almost continual playing of the many exquisitely beautiful selections to be found in the cabinet of records opposite the electric phonograph in the second floor lobby of Walker Memorial.

Many of our future engineers evidently realize the absolute futility of a college education which does not include cultural subjects, and so they have seized upon this opportunity to teach themselves to understand the charming strains of the best classical composers.

The music is of the very best quality and has been especially selected. Some of the great composers included in the collection are the immortal Beethoven, whose enthralling symphonies are played incessantly; Wagner, whose Walkerei live once again in the hearts of those who hear them; and Hayden, the father of symphonies.

Caruso, Galli Curci, Jeritza, and Schumann-Heink also are to be heard. The rapture of these classical composers and these marvelous singers has woven itself into the hearts of these many young music lovers, and it is well that this may be so.

Thus, it is perhaps not so strange to relate that the few jazz records to be found among the classics are almost never played. Such spirit as this should be encouraged. Every effort should be made to aid our music lovers so that they may actually hear only the best recordings. To this end it might be well to replace some of the records whose tone has been damaged by long usage, or having been made by the old recording process are really useful only as relics.

Such records as Beethoven's Ninth Symphony which have have perhaps seen their best days, and the Coriolanus Overture which has been broken might well be replaced. Perhaps even Gounod's Faust should be purchased as a valuable aid to such a collection.

A high quality electric pick-up would improve the range greatly so that the bass horns and piccolos could be heard to advantage, and none of the overtones lost. On the whole, the present collection of records is truly a beautiful one, but several of our music lovers are agreed that many records should be replaced because of age.

Dixie, only canine Doctor of Philosophy, was killed at the University of North Carolina a short time ago. The faculty bestowed the degree upon her in 1926 after she had served faithfully as campus pet for many years.

Harvard does not allow in her dormitories either "women or dogs."

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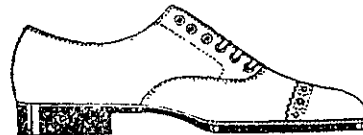


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